

Abstract

To provide a fuel cell that includes a cell unit formed by
5 arranging an anode and a cathode on a proton exchange membrane
and that can stably generate electricity with excellent
characteristics. To realize such a fuel cell, wettability
of the proton exchange membrane and the electrode catalyst
layer is made uniform. In a gas diffusion layer 24 sandwiched
10 between a cathode catalyst layer 22 and a cathode side separator
plate 60, water retentivity in a predetermined range from
an inlet for an oxidizing gas (air) is adjusted so as to be
higher in parts 24A that face oxidant channels 65 than in
parts 24B that face ribs 66. This wettability adjustment in
15 the gas diffusion layer 24 is accomplished by setting water
repellent material content per unit area in the channel facing
parts 24A smaller than in the rib facing parts 24B.